



## The Minuteman Repeater Association

*A non-profit organization providing communications infrastructure and volunteers for community and emergency events.*



# The Minuteman

Volume 49, Number 3

January 2020

**Membership Meeting Wednesday, 15 January 7:30 PM**

***Paul Topolski, W1SEX***

***Heath History, the GI Bill, and Economics of Restoration.***

***Talkin: 147.270***

***Location: Leominster EMA Amphitheater , 37 Carter Street, Leominster, Ma, 01453 (see p.11)***

Heath Company was a major player in the electronics industry with hundreds of Heathkit products that educated customers and provided the satisfaction of building and enjoying their own equipment. Heath started with aircraft and transitioned to electronics with test equipment after World War II. Heath added HiFi and ham radio gear within a few years.

Paul Topolski, W1SEX of Gardner, Massachusetts will speak about the interesting and colorful history of Heath Company. Paul will speak about the company founder and the subsequent owners of Heath and how the Company's rapid growth was bolstered by numerous economic factors that came to fruition at the close of World War II. Paul will outline these intertwined factors which lead to tremendous success and the ultimate failure of the company. Finally, Paul will show why Heathkits are among the best ham radio products to restore from both a practical and economical basis.

*Paul, an Extra class ham licensed for over twenty-eight years is one of the ARRL Western MA Section Technical Specialists and enjoys bringing the technical side of the hobby to fellow radio amateurs. Paul's early professional career was in the electronics industry working for the former Simplex Time Recorder Company starting as a field Technical Representative and culminating as a Senior Sales Engineer. Prior to retirement Paul's second career was in the law enforcement profession serving in both civilian and sworn positions.*

*Paul's presentation is packed with facts both Heathkit aficionados and those new to Heathkits will find surprising.*



The MMRA is a charter member. See Page 3 and 6.

Signup at < [zerofalls.org](http://zerofalls.org).>

### Table of Contents

MMRA Meetings	1, 8
MMRA Information	2, 11
President's Corner	3
Repeater Update Winter Field Day Opportunity	4
November Membership Meeting	5
December Business Meeting	7
Bears in Belmont	8
TiaOS Net Update / Distracted Driving	10
Flea Markets / January Meeting Location	12

## About the Minuteman Repeater Association

### MMRA Control Operators Responsibilities

<https://www.mmra.org/MMRACOPolicy-March2019.pdf>

The Minuteman Repeater Association (MMRA) is dedicated to Amateur Radio and public service. The MMRA maintains a large system of repeaters in Eastern Massachusetts.

The MMRA meets each month from September to June. Meeting times, locations, and talk-in frequency vary and are announced in this newsletter and on weekly nets. Meetings are open to all interested parties. Guest speakers and programs of general interest occur in September, November, January, March, and May. The intervening meetings are also open to all members and are for general business.

The Minuteman newsletter is emailed one week before each general interest meeting. Members are encouraged to submit articles: send to the editor at [newsletter@mmra.org](mailto:newsletter@mmra.org). The deadline for articles is the last Friday of the month preceding the meeting.

Each Tuesday evening at 8PM the MMRA links most of the repeaters for an open net. The topic is "Technical Information and Other Stuff". Join us!

Membership in the MMRA is open to all radio amateurs. Annual dues are \$25 per individual or \$35 per family. See our website for details.

Contact information is listed on the top of the last page of this newsletter.

*No part of this newsletter can be copied or posted elsewhere without prior approval from the club.*

### MMRA QRM Policy

MMRA members and all other operators are strongly encouraged to report repeater activity that does not abide by Part 97 rules or accepted amateur radio practice to the board of directors at [contact@mmra.org](mailto:contact@mmra.org) or via other means.

The most effective way (and probably the only effective way) to deal with an individual causing QRM is to NOT engage that individual on the air. Please include the time and date of any incident.

## Repeater and Frequency Information

Band	XMTR Location	Freq	PL	Call	Linking	
					To Hub 1	To Hub 2
MMRA Voice Repeaters						
10m	Marlboro East	29.680	131.8	W1MRA	PTL	PTL
6m	Marlboro East <i>Rmt receive Marlboro West: PL=100</i>	53.810	71.9	W1BRI	PTL	PTL
2m	Brookline	145.160	na	K1MRA	D-Star (REF050C)	
	Belmont	145.430	146.2	KC1CLA	PTL	FTL: DARI
	Mendon	146.610		K1KWP	FTL	PTL
	Quincy	146.670		W1BRI	PTL	PTL
	North Reading	146.715		KC1US	PTL	PTL
	Weston	146.790		N1BE	PTL	PTL
	Boston <i>Remote receive in Brookline Boston: PL = 127.3</i>	146.820		K1BOS	FTL	PTL
	Marlborough	147.270	146.2	W1MRA	PTL	PTL
1½m	Marlborough	223.940	103.5	W1MRA	PTL	FTL
	Quincy	224.400		N1KUG	PTL	FTL
	Weston	224.700		N1NOM	PTL	FTL
	Burlington	224.880		KC1US	PTL	FTL
70cm	Lowell	442.250	88.5	K1LVF	FTL	PTL: 446.775
	Weston *	442.700		N1DCH	Network Hub 2 (PTL to Hub 1)	
	North Reading	446.775		W1DYJ	FTL	PTL
	Marlborough	448.225	na	W1MRA	D-Star (REF050C)	
	Hopkington	449.575	88.5	W1BRI	PTL	PTL
	Marlborough *	449.925		W1MRA	Network Hub 1	
33cm	Boston *	927.0625	D244	K1RJZ	PTL	PTL
	Marlborough *	927.700 PL out = 131.8		W1MRA	PTL	PTL
Marlborough		144.390	none	W1MRA	APRS Digipeater	
???		145.630	146.2	W1MRA	Fox Box	
*Internet	HUB1- 449.925: IRLP node 4133 / Echolink node 4133 Connected to Echolink NEWENG2 conference (9127) for TIAOS net.					
	HUB2 - 442.700: IRLP node 4136 / Echolink node 4136 Connected to 220 Reflector 9124 on Tuesdays					
	927.0625: IRLP 4977			Normally linked to the NE900 Reflector, 9125. Linked to MMRA via IRLP node 4134 for the TIAOS net. Normally linked together.		
	927.700: IRLP 4978					

Notes: FTL = Full Time Linked (or default state) PTL = Part Time Linked (on schedule or demand)

## President's Corner ~ David Hornbaker, N1DCH

Happy New Year! I hope everyone had happy holidays.

There have been five amateur tower related deaths this year, nine in the last five years versus eight in the previous eleven years. The frequency of tower incidents is increasing. To help educate HAMS and to combat the increase, MMRA has become a charter member of the Zero Falls Alliance. I would urge everyone to check the information on Jim Idelson's, K1IR presentation at the November, 2019 meeting cited below. Also, check out Jim's Ham Nation appearance <https://blog.thedrivenelement.com/2019/12/tower-safety-month-on-ham-nation/>.

I am a charter member of the Zero Falls Alliance. I urge all of you to take the pledge to reduce tower accidents by joining the Zero Falls Alliance at <http://zerofalls.org>.

I spent many hours in my youth building Heathkit kits. My first kit was an IM-28 VTVM, followed by several other pieces of test equipment. I am currently restoring a Heathkit HW-9 QRP CW Transceiver, which I built years before I was licensed. I am looking forward to January's presentation, Heath History, the GI Bill, and Economics of Restoration by Paul Topolski, W1SEX. Note Location, Leominster EMA Amphitheater, 37 Carter Street, Leominster, Ma, 01453. I hope to see you all there!

MMRA name tags can now be ordered from The Maine Store, see details at the bottom of this page.

The February Business meeting will be **teleconference only**. The conference information will be sent to board members early the week of the meeting. All are welcome, so if you want to attend the teleconference, please send a request by 2/19/20, 12:00 PM to [contact@mmra.org](mailto:contact@mmra.org).

I would like to thank Eric, KV1J, City of Marlborough Fire Department, and Marlborough Emergency Management Agency for hosting the November membership meeting and the December business meeting.

Please note that membership renewal sent via U.S. Mail may take up to 2 weeks to be processed.

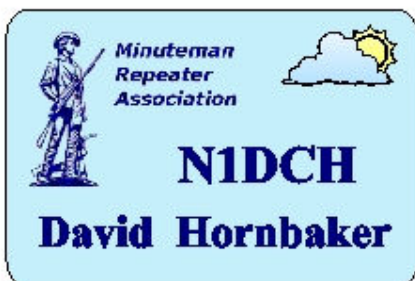
I look forward to meeting you on the air during the TlaOS net every Tuesday at 8:00 PM.

### MMRA Name Tags

You can now have your very own MMRA Nametag!

We have arranged with The Maine Store to make these tags available for \$15. To order, go to:

< <https://www.themainestore.com/item/NAME-TAG-MINUTEMAN-REPEATER-100558> >



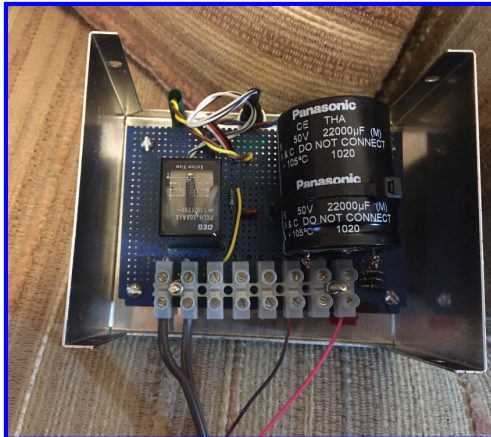
### *Ask your friends to become a member*

Just let them know that it is not fully automated. Although they can log into the MMRA website immediately, they need to be manually processed. This could take up to week.

If you haven't updated your MMRA profile in a while, now is the time! Go to < [MMRA.ORG](http://MMRA.ORG) > and log in to do so.

## Repeater Update ~ Bob DeMattia, K1IW

The technical crew has been picking at a few things here and there over the past few months. First, the link radio on 147.27 has been replaced. This hopefully will end the drop-outs that were being reported for several weeks. Bryan, W1BRI, also



rebuilt the power conditioning circuit on 147.27 from a previously unstable version to a clean version with a voltage display. When we switch from AC power to battery, there is a short glitch that would normally reset the 7330 controller. The large cap in this box prevents this. Also in this box is the power fail detect circuit which feeds to the logic input on 147.27.



On December 30th, KC1US and I installed the 224.880 repeater at our previously former, and now current site at the Lahey Hospital in Burlington. This was the former site of 146.715 and 446.775 before they were moved to North Reading.

In not-so-good news, the link antenna at Belmont has failed. We measured the SWR at 5:1. The link radio itself was also damaged and will need to be replaced. Once the weather is nice enough, we will go back to the site to install the new antenna and replace the radio.



## Winter Field Day Opportunity ~ Bob Phinney, K5TEC

Members of MMRA are invited to Winter Field Day 2020, January 25, any time between 2-10 pm. Join the FUN! Pot Luck Dinner, Ham Radio Event, Maker Activities, Planetarium Shows, Guest Speaker, Games, Movie Night, all in one! Also celebrating the Lunar New Year!

Spouses and children welcome. Hosted by members of Sci-Tech Amateur Radio Society (STARS), New England Amateur Radio (NEAR), and New England Sci-Tech (NEST), at 16 Tech Circle, Natick.

Please sign up at: <https://www.nescitech.org/winter-field-day/>



## 20 November 2019 Membership Meeting Larry Banks, W1DYJ ~ Clerk *pro-tem*

Meeting called to order at 7:19  
by Dave, N1DCH, President.

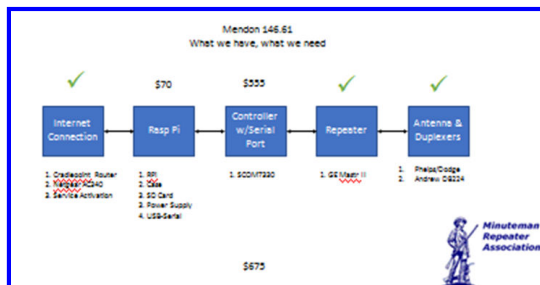
Location: Marlborough Fire Department  
Central Station, 215 MAPLE Street (Rt. 85),  
Emergency Management Room.  
18 members present



### Business Meeting

Bob, K1IW, presented a short update of the status of the repeaters, and presented two requests for funding:

- **(1) Purchase one SCOM 7330 repeater controller, Raspberry Pi and accessories to upgrade the Mendon controller and make it internet accessible.**

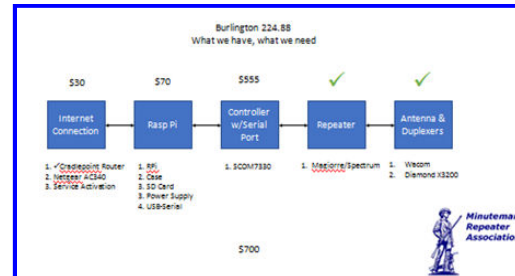


**Background:** The Mendon controller is needed to make the MMRA system 100% internet controlled. All other existing repeaters have already been upgraded. With the upgrade, control operator functions are easier and less intrusive. It also eases the process of debugging technical problems and performing controller firmware upgrades.

**Moved** to appropriate (not to exceed) \$700 for above. Seconded. There was no discussion.

**Voted unanimously.**

- **(2) Purchase one SCOM 7330 repeater controller, Raspberry Pi and accessories, and internet linking equipment to put the 224.880 repeater online at Lahey Hospital in Burlington.**



**Background:** The 224.880 repeater was removed from service when 223.94 was moved from Hopkinton to Marlborough. It is now in storage. 146.715/446.775 were formerly located at Lahey Hospital in Burlington. They were moved to North Reading in 2016. This proposal is to locate 224.88 at the Burlington site (to which we still have access).

**Moved** to appropriate (not to exceed) \$700 for above. Seconded.

A short discussion revolved around whether we needed to add another 220 repeater and whether this Burlington site was appropriate. The consensus was that it made sense as we had the site and most of the equipment, but needed to make the control system compatible with the network. **Voted unanimously.**

### Marlborough Emergency Management

Eric, KV1J, gave us a short overview of Marlborough's emergency management setup, from both an organizational and communication viewpoint. (Editor's comment: I thought it was impressive, and felt others in attendance concurred.)

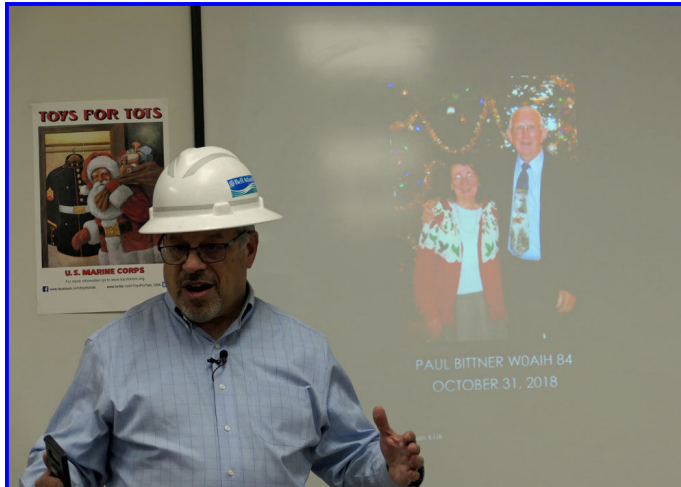


## 20 November 2019 Membership Meeting (continued)

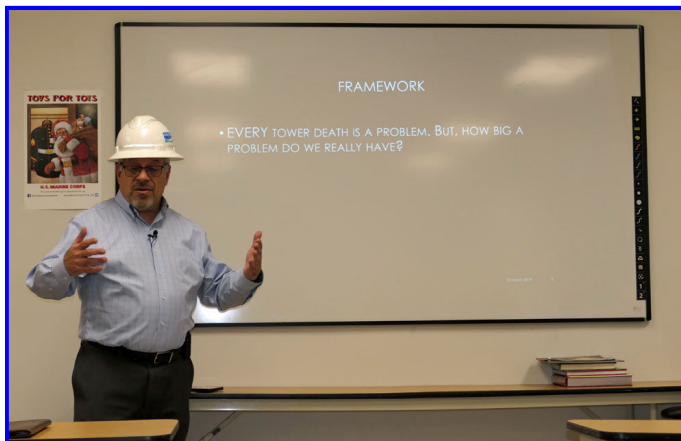
### The Main Event

#### Amateur Radio Tower Safety: Is It Time for Change?

Jim Idelson ~ K1IR



Jim presented the three simple things every ham must do to dramatically reduce the deadly risks of tower work. Recent tragic events drove a full investigation of amateur radio tower fatalities in the US over the past 20 years. The results of the research are disturbing, but they also show us exactly what we need to do to eliminate this problem in our community. This talk was very well received.



#### Framework

*Every tower death is a problem. But how big a problem do we really have?*

[Answer: ham death and injury statistics are much worse than commercial tower climbers' statistics.]



After discussing the facts and obvious solutions, Jim demonstrated some of the proper tower climbing equipment needed for safe climbing.

Finally, Jim introduced his initiative: the

**Zero Falls Alliance**, a non-profit corporation to promote safety in all ham radio activities. A number of hams present signed up for this Alliance at the end of the talk. The MMRA Board of Directors will discuss joining the Alliance as a Club at our next Business Meeting on 18 December.



Here is a link to Jim's blog and his talk:

<https://blog.thedrivenelement.com/>

Meeting adjourned at ~ 9:35 pm.

Larry Banks, Clerk pro-tem

*Note:* We usually meet for dinner before our meetings. Join us! Shown are John, WA1MDD; Kevin, K1KWP; Larry, W1DYJ (feeding his face); James, N1DDK, Jim, K1IR (our speaker); and Bob, K1IW.



## December 2019 Business Meeting Minutes

### Larry Banks, W1DYJ ~ Clerk pro-tem

Minutes of the MMRA Business Meeting of 18 December 2019

Location: Marlborough Central Fire Station

Meeting called to order at 7:45 EST

Present: Dave, N1DCH; Bob, K1IW; Clark, N1NVK; Kevin, K1KWP; Eric, KV1J; Bruce, KC1US

Via teleconference: John, WA1MDD; Jason, W1HFP; Larry, W1DYJ

#### New Business

Zero Falls Alliance – During Jim, K1IR's excellent talk to us in November, he solicited the MMRA to join the Alliance. After a short discussion, Dave (N1DCH) moved to join, Kevin (K1KWP) seconded and the vote was unanimous.

A subsequent discussion concerning a donation to the Alliance led to the realization that the MMRA does not have a policy on donations. The board will take up this subject in the future.

NOTE: During this discussion, Larry (W1DYJ) was asked to send Jim an email telling him of our decision. After the meeting, Larry (W1DYJ) listened to the HAM NATION PodCast where Jim was presenting Part III of his talk. Jim's slide of those clubs who have joined included the MMRA! FAST WORK on Jim's part, and we should be proud of the group we have joined.

In a subsequent email from Jim, there are future items that will help the Alliance:

- Display the Zero Falls "We took the pledge." logo in a prominent place on MMRA website and newsletter
- Recruit a volunteer to help us with any of a number of jobs that will help us move forward.
- ...and more



#### Repeater Update

Belmont: Link antennas has likely failed.

MRW: Low link audio on 146.27 and hiss on 223.94

Burlington: 224.88 configured and was "working" at the meeting. To be installed at Lahey Clinic in the new year. Motion (Clark, N1NVK) and seconded (Kevin, K1KWP) to appoint Bruce, KC1US as trustee. Unanimous.

Weston 442.700 Motion (Bob, K1IW) and second (Clark, N1NVK) to appoint Dave, N1DCH as trustee. Unanimous.

Mendon Ready to install upgrade, need decent weather.



## December 2019 Business Meeting Minutes ~ continued

### Meeting Updates

February Business Meeting to be teleconference only

June Business Meeting to be at the Marlborough Central Fire Station

### Newsletter:

- Articles for the January edition need to be sent to Larry by 27 December (the last Friday of the preceding month, as always)
- Algonquin Flea in February to be in the newsletter
- Renewals: Jason (W1HFP) to look into sending an email out to all those who have not rejoined.

MMRA Callsign Badge Dave(N1DCH) to look into having an MMRA logo specific call sign badge made available to members.

Meeting adjourned at 9:04 EST

Submitted by Larry, W1DYJ, Clerk pro tem

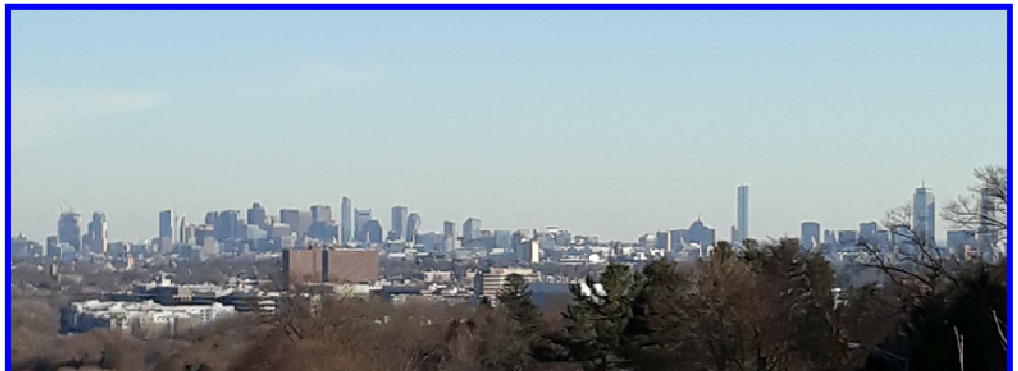
## Bears in Belmont! ~ Bruce Pigott, KC1US

No, not the honey beehive raiding type. Most of the MMRA systems are linked in the local area using two hub systems by radios. The 145.430 repeater located in Belmont also has a mode connecting it to the Broadcast Employees Amateur Radio Society and the Disney Amateur Radio Interconnect network. Most of the day it is linked to BEARS/DARI by program control. The linking is done by a dedicated, proprietary Internet Protocol network, not IRLP or EchoLink. It presently connects repeaters in six states. Early mornings it is a stand alone system



The Belmont web page at < <https://www.mmra.org/repeaters/BEL> > gives the repeater history, system information and a link to the BEARS web page. The < <http://w2abc.org/bears-dari-repeater-network> > site has details about the linked systems and the sponsoring organizations. Look carefully on the list of repeaters. Only the ones with asterisks are part of the network. Repeaters in California and Pennsylvania are not presently accessible. If you hear an EchoLink connection, it is hams connecting to the Orlando, Florida system. Many people are not aware it is a linked system. They think their local repeater has great coverage or ducting is happening. Since the repeaters are on different bands or frequencies, it is impossible. When using the system, pause as you would on any linked network before speaking, and say you are in the Boston area

With a great view of Boston, Belmont is used to support Public Service events. A recent upgrade was done to install an S-COM 7330 controller. This handles connections to the hubs, scheduled actions and MMRA member functions.



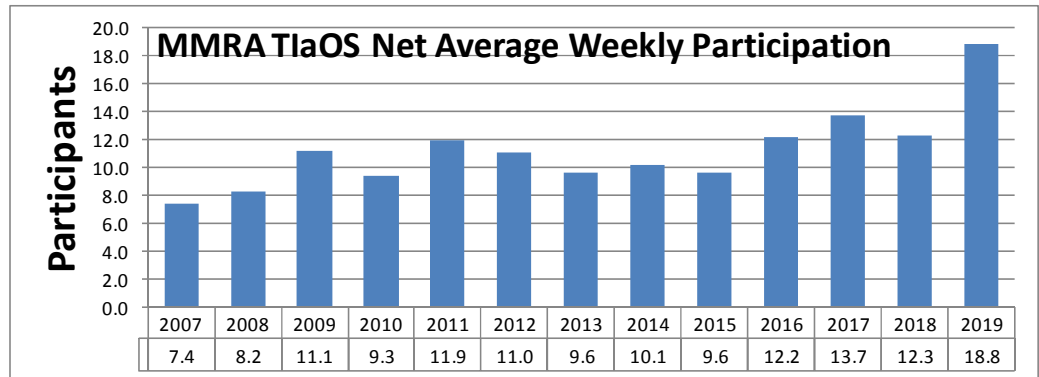


## MMRA TlaOS Net — Annual Update ~ Larry Banks, W1DYJ, Net Manager

We have seen an increase in our weekly net participation this year.

Do join us! More information is on the page 11.

I would also like to welcome a new Net control. Jonathan Traum, K1BTZ, has volunteered to be an NC substitute.



## Distracted Driving

The recent enactment of the *Massachusetts Distracted Driving* law has generated some consternation among those of us who have mobile rigs. Here is something that you might want to print, cut out, and keep in your car in case you have any visits from your local gendarme.

Statement of 21 November 2019 from the General Counsel's office of the Joint Committee on Transportation, regarding the Massachusetts Distracted Driving Law, H4203.

*It is the Committee's view that the legislation does not alter, amend or limit existing language in section 13 of chapter 90 of the General Laws that expressly permits use of a 'federally licensed 2-way radio' provided that '1 hand remains on the steering wheel at all times.'*

## The Amateur's Code

The Radio Amateur is:

**CONSIDERATE**...never knowingly operates in such a way as to lessen the pleasure of others.

**LOYAL**...offers loyalty, encouragement and support to other amateurs, local clubs, and the American Radio Relay League, through which Amateur Radio in the United States is represented nationally and internationally.

**PROGRESSIVE**...with knowledge abreast of science, a well-built and efficient station and operation above reproach.

**FRIENDLY**...slow and patient operating when requested; friendly advice and counsel to the beginner; kindly assistance, cooperation and consideration for the interests of others. These are the hallmarks of the amateur spirit.

**BALANCED**...radio is an avocation, never interfering with duties owed to family, job, school or community.

**PATRIOTIC**...station and skill always ready for service to country and community.

Paul M. Segal, W9EEA, 1928



Algonquin Amateur Radio Club  
Marlborough, MA



AMATEUR  
RADIO

# FLEA MARKET

Saturday, February 15, 2020



**Marlborough 1Lt Charles W.  
Whitcomb School**  
(formerly Intermediate/Middle School)  
25 Union St. or  
off Bolton St. (Rt. 85)  
Marlborough, Massachusetts

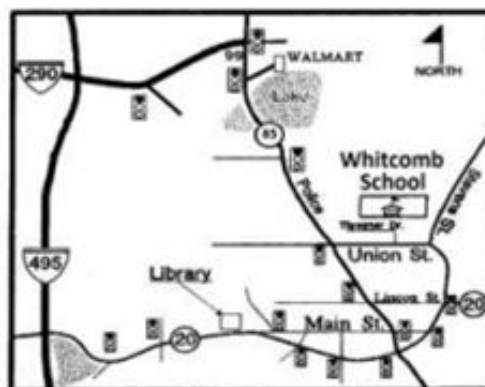
**6 ft. Tables** (round and rectangular)  
Tables are \$15.00 each if purchased by  
February 7, 2020 (\$20.00 each accepted  
at the door if space is available)  
Tables include vendor admission for one  
person.

## SETUP TIME: 6:30 AM

Information:  
Tim Ikeda - KA1OS  
1-508-919-6136 before 9:00 PM  
email: fleamarket@n1em.org

Talk In: MMRA 147.27+ (pl 146.2)

**Time: 9:00 AM to 1:00 PM**  
**General Admission: \$5.00**  
**VEC Exams: 9:00 AM**



**Send This Form** For Table Reservations with Check Payable to:  
AARC, PO Box 258, Marlborough, MA 01752 (\$15.00 each table due by February 7)

Name: \_\_\_\_\_ Call: \_\_\_\_\_  
Address: \_\_\_\_\_ No. Tables: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
Telephone: (\_\_\_\_) \_\_\_\_\_ Amount Enclosed: \$ \_\_\_\_\_ .00  
Email: \_\_\_\_\_

## Upcoming MMRA Meetings

Note: Meeting locations and times are subject to change.

Consult the MMRA website for the most up-to-date information.  
Teleconference numbers will be available one week before a business meeting—if you wish to attend, email [contact@mmra.org](mailto:contact@mmra.org).

Sunday, 8 Sept ~ Northeast HamXposition @ Boxboro Noon

Wednesday, 18 September ~ Membership Meeting ~ 7:30 PM  
Two Ideas for Skyhooks Larry Banks, W1DYJ  
Location: New England Sci-Tech Inc., Natick

Wednesday, 16 October ~ Business Meeting ~ 7:30 PM  
Location: New England Sci-Tech Inc., Natick + Teleconference

Wednesday, 20 November ~ Membership Meeting ~ 7:30 PM  
Amateur Radio Tower Safety: Is It Time for Change? Jim Idelson ~ K1IR  
Location: Marlborough Central Fire Station

Wednesday, 18 December ~ Business Meeting ~ 7:30 PM  
Location: Marlborough Central Fire Station + Teleconference

Wednesday, 15 January ~ Membership Meeting ~ 7:30 PM  
Speaker/Topic: Paul Topolski, W1SEX, Heathkit: History and Restoration  
Location: Leominster EMA

Wednesday, 19 February ~ Business Meeting ~ 7:30 PM  
Location: Teleconference

Wednesday, 18 March ~ Membership Meeting **Note: 7:00 PM Start**  
SKYWARN Training Rob Macedo, KD1CY  
Microsoft Burlington

Wednesday, 15 April ~ Business Meeting ~ 7:30 PM  
New England Sci-Tech Inc., Natick + Teleconference

Wednesday, 20 May ~ Annual Meeting & Elections ~ 7:30 PM  
Antenna Modeling: TLW, YW, HFTA, and EZNEC Larry Banks, W1DYJ  
Location: Campion Center, Weston

Wednesday, 17 June ~ Business Meeting ~ 7:30 PM  
Location: Marlborough Central Fire Station + Teleconference

## Don't Forget! Join Us.

Every Tuesday @ 8 PM

Technical, Informational and Other Stuff Net

The MMRA's repeaters are linked Tuesday nights for the TIOS Net. Keep up with what's happening in the MMRA and ask your ham related questions.

### Net Control Operators:

Week 1	W1DYJ	Larry Banks
Week 2	WA1JIM	Jimmy Devaire
Week 3	KC1CLA	Ed Curley
Week 4	K1KWP	Kevin Paetzold
Week 5	KB1OQA	Tom Turner
Substitute	K1BTZ	Jonathan Traum

To connect using Echolink / IRLP during the Net:

- Echolink Conference \*NEW-ENG2\*
- IRLP node 4133

Previous issues of the MMRA Newsletter are available at:  
[www.mmra.org](http://www.mmra.org) → [Newsletter Archive](#) (on the left)

## MMRA Leaders

### Executive Board — Officers

President	Dave Hornbaker	N1DCH
Vice President	John Spencer	WA1MDD
Secretary	Jason Peardon	W1HFP
Treasurer	Kevin Paetzold	K1KWP
Clerk	Charles Miller	KC1JUO

### Executive Board — Directors

Director »2020	Clark Conti	N1NVK
Director »2020	James Lee	N1DDK
Director »2021	Bob DeMattia	K1IW
Director »2021	Roger Coulson	WA1NVC

### Technical Officer

Technical Officer	Bob DeMattia	K1IW
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### President Emeritus

Bob DeMattia	K1IW
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### Technical Officer Emeritus

Bryan Cerqua	W1BRI
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### Repeater Trustees

* Belmont 145.43	Ed Curley	KC1CLA
* Boston 146.82	John Mullaney	K1BOS
* Boston 927.0625	Rick Zach	K1RJZ
* Brookline 145.16	Joyce DeMattia	K1IWW
* Brookline Rcv 146.82	Bob Phinney	K5TEC
* Burlington 224.88	Bruce Pigott	KC1US
* Hopkinton 449.575	Bryan Cerqua	W1BRI
* Lowell 442.25	Vince De La Flor	K1LVF
* Marlborough 53.81	Bryan Cerqua	W1BRI
* Marlborough: 29.68, 144.39, 147.27, 223.94, 448.225, 449.925, 927.70 — all as W1MRA	Bill Northup	N1QPR
* Mendon 146.61	Kevin Paetzold	K1KWP
* N. Reading 146.715	Bruce Pigott	KC1US
* N. Reading 446.775	Larry Banks	W1DYJ
* Quincy 224.40	Bill Dunn	N1KUG
* Quincy 146.67	Bryan Cerqua	W1BRI
* Weston 146.79	Bob Evans	N1BE
* Weston 224.70	Eddie Mulhern	N1NOM
* Weston 442.70	Dave Hornbaker	N1DCH

### Additional, non-Voting

* Newsletter Editor	Larry Banks	W1DYJ
* Emerg. Coord.	Kevin Paetzold	K1KWP
* Pub. Serv. Coord.	Bruce Pigott	KC1US
* VEC Liaison	Bill Wade	K1IJ
* Net Manager	Larry Banks	W1DYJ
* Web Page Editor	Bob DeMattia	K1IW

\* Appointed

## MMRA VE Sessions

Check here for the schedule:

<http://www.mmra.org/exam.html>

Contact: Bill Wade, K1IJ 617-699-3670  
Evenings 6 - 10 PM Weekends 8 AM to 10 PM.



## Contacting the MMRA



Members: [MMRA@yahoogroups.com](mailto:MMRA@yahoogroups.com)

*Note: This may take some time.*

*You must be approved by the moderator.*

Officers: [contact@mmra.org](mailto:contact@mmra.org)

Control Ops: [control-ops@mmra.org](mailto:control-ops@mmra.org)



<http://www.mmra.org/>



@mmraham



<https://www.facebook.com/mmraham>

## Calendar of Ham Radio Flea Markets & Gatherings

For more information: <http://mit.edu/w1gsl/Public/ne-fleas>

18 Jan	Whitman MA	WARC @KoC
15 Feb	Marlboro MA	AARC @MidSch
7 Mar	Chicopee MA	MtTARA @Castle
29 Mar	Southigton CT	
10,11 Apr	Lewiston ME	AARC @ Ramada
26 Apr	Thompson CT	ECARC @Racewa

## Directions to Leominster EMA Amphitheater , 37 Carter Street, Leominster, Ma, 01453

For more information, see < <http://www.leominsteroma.org/map-directions.htm> >

From the East: Take Route 2 West into Leominster (Johnny Appleseed Rest Area is on the right). Take exit 33 "I-190 Leominster Worcester" and stay to the left of the ramp and look for the sign "Mechanic Street Leominster". Then follow directions below...

From the South: Take I-190 West into Leominster and take exit 8B "Route 2 Boston". Approximately 50 yards down the ramp take the left exit marked "Mechanic Street Leominster" which turns into Mechanic Street at the bottom of the ramp. Then follow directions below...

From the West: Take Route 2 East to Leominster, bear right onto Exit 33 Route I-190 "Leominster / Worcester". Take exit 8 "Mechanic Street Leominster" to the bottom of the ramp. At the bottom of the ramp take a left onto Nashua Street and at the traffic light take a right onto Mechanic Street. Then follow directions below...

...Follow Mechanic Street for approximately 1/2 mile and take a left onto Fifth Street. Follow Fifth Street until you come to the first intersection and take a right onto Carter Street. The beige building on the corner of Fifth Street and Carter Street is the Emergency Management building, the main entrance is the glass door on Carter Street.

